

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

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Listing of Claims:

Claim 1 (previously presented): A cooling system for cooling a circuit board including a first heat source and a second heat source, comprising:

10 a layer of thermally conductive material in conforming thermal contact with the first and second heat sources;

 a thermal conduit in thermal contact with the layer, the thermal conduit being configured for dissipating heat from the layer; and

15 an actuator configured to actuate the thermal conduit into thermal contact, via the layer, with the first and second heat sources.

Claim 2 (original): The cooling system of claim 1, wherein the layer is composed of solidified foam conformingly received over the first and second heat sources.

20 Claim 3 (withdrawn): The cooling system of claim 2, wherein the layer is composed of solidified foam formed by applying a coating of foam over the first and second heat sources prior to its solidification.

25 Claim 4 (withdrawn): The cooling system of claim 1, wherein the actuator is configured to actuate the thermal conduit into conforming thermal contact with the layer.

Claim 5 (withdrawn): The cooling system of claim 4, wherein the thermal conduit includes a roll bond panel.

30 Claim 6 (withdrawn): The cooling system of claim 4, wherein the thermal conduit includes a body defining passageways configured for cooling fluid.

Claim 7 (withdrawn): The cooling system of claim 6, and further comprising a pump and a heat exchanger in fluid communication with the passageways defined by the body to form a liquid loop cooling system.

5 Claim 8 (previously presented): The cooling system of claim 1, wherein the thermal conduit includes walls that define cooling fluid passageways through the layer.

10 Claim 9 (previously presented): The cooling system of claim 8, and further comprising a pump and a heat exchanger in fluid communication with the passageways through the layer to form a liquid loop cooling system.

15 Claim 10 (previously presented): The cooling system of claim 1, wherein the actuator is configured to actuate the layer into conforming thermal contact with the first and second heat sources.

Claim 11 (currently amended): The cooling system of claim 10, wherein the layer is ~~composed of foam formed by machining a solid foam body~~ configured with varied thickness to substantially conform to the first and second heat sources.

20 Claim 12 (previously presented): The cooling system of claim 10, wherein the thermal conduit includes a roll bond panel.

25 Claim 13 (previously presented): The cooling system of claim 10, wherein the thermal conduit includes a body defining passageways configured for cooling fluid.

Claim 14 (previously presented): A cooling system for cooling a circuit board including a first heat source and a second heat source, comprising:

a means for transferring heat, being in conforming thermal contact with the first and second heat sources;

30 a thermal conduit in thermal contact with the means for transferring heat, the thermal conduit being configured for dissipating heat from the means for transferring heat; and

an actuator configured to actuate the thermal conduit into thermal contact, via the means for transferring heat, with the first and second heat sources.

Claim 15 (previously presented): The cooling system of claim 14, wherein the means for transferring heat is a unitary pad of thermally conductive material.

Claim 16 (previously presented): A cooled circuit board system, comprising:

5 a board configured for electrically connecting components for communication;
a first component heat source mounted on and in electrical communication with the board;

a second component heat source mounted on and in electrical communication with the board;

10 a layer of thermally conductive material in conforming thermal contact with the first and second heat sources;

a thermal conduit in thermal contact with the layer, the thermal conduit being configured for dissipating heat from the layer; and

15 an actuator configured to actuate the thermal conduit into thermal contact, via the layer, with the first and second heat sources.

Claim 17 (previously presented): The cooled circuit board system of claim 16, wherein the layer is composed of solidified foam conformingly received over the first and second heat sources.

20 Claim 18 (withdrawn): The cooled circuit board system of claim 17, wherein the layer is composed of solidified foam formed by applying a coating of foam over the first and second heat sources prior to its solidification.

25 Claim 19 (withdrawn): The cooled circuit board system of claim 16, wherein the actuator is configured to actuate the thermal conduit into conforming thermal contact with the layer.

30 Claim 20 (withdrawn): The cooled circuit board system of claim 19, wherein the thermal conduit includes a roll bond panel.

Claim 21 (withdrawn): The cooled circuit board system of claim 19, wherein the thermal conduit includes a body defining passageways configured for cooling fluid.

Claim 22 (withdrawn): The cooled circuit board system of claim 21, and further comprising a pump and a heat exchanger in fluid communication with the passageways defined by the body to form a liquid loop cooling system.

5 Claim 23 (previously presented): The cooled circuit board system of claim 16, wherein the thermal conduit includes walls that define cooling fluid passageways through the layer.

Claim 24 (previously presented): The cooled circuit board system of claim 23, and further comprising a pump and a heat exchanger in fluid communication with the
10 passageways through the layer to form a liquid loop cooling system.

Claim 25 (canceled)

Claim 26 (previously presented): The cooled circuit board system of claim 24, and further
15 comprising:

a second board configured for electrically connecting components for communication;

a third component heat source mounted on and in electrical communication with the second board;

20 a fourth component heat source mounted on and in electrical communication with the second board;

a second layer of thermally conductive material in conforming thermal contact with the third and fourth heat sources;

25 a second thermal conduit in thermal contact with the second layer, the second thermal conduit being configured for dissipating heat from the second layer; and

a second actuator configured to actuate the second thermal conduit into thermal contact, via the second layer, with the third and fourth heat sources;

wherein the second thermal conduit includes walls that define cooling fluid passageways through the second layer; and

30 wherein the pump and the heat exchanger are also in fluid communication with the passageways through the second layer.

Claim 27 (previously presented): The cooled circuit board system of claim 16, wherein the actuator is configured to actuate the layer into conforming thermal contact with the first and second heat sources.

5 Claim 28 (withdrawn): The cooling system of claim 27, wherein the layer is ~~composed of foam formed by machining a solid foam body~~ configured with varied thickness to substantially conform to the first and second heat sources.

10 Claim 29 (previously presented): The cooling system of claim 27, wherein the thermal conduit includes a roll bond panel.

Claim 30 (previously presented): The cooling system of claim 27, wherein the thermal conduit includes a body defining passageways configured for cooling fluid.

15 Claim 31 (previously presented): The cooling system of claim 27, wherein the first and second heat sources extend to different heights with respect to the circuit board, wherein:
 the layer is configured to compliantly adapt to the difference between the heights of the first and second heat sources when the actuator is actuated to place the thermal conduit into thermal contact, via the layer, with the first and second heat sources.

20 Claim 32 (previously presented): The cooling system of claim 31, and further comprising a stop, wherein the stop is configured to limit the actuation of the thermal conduit so as to prevent the application of excessive force on the heat sources.

25 Claim 33 (withdrawn): The cooling system of claim 19, wherein the first and second heat sources extend to different heights with respect to the circuit board, wherein:

 the layer extends up from the heights of the first and second heat sources to a third height; and

30 the actuator is configured to actuate the thermal conduit into contact with the layer at the third height.

Claim 34 (withdrawn): The cooled circuit board system of claim 22, and further comprising:

a second board configured for electrically connecting components for communication;

5 a third component heat source mounted on and in electrical communication with the second board;

a fourth component heat source mounted on and in electrical communication with the second board;

10 a second layer of thermally conductive material in conforming thermal contact with the third and fourth heat sources;

a second thermal conduit in thermal contact with the second layer, the second thermal conduit being configured for dissipating heat from the second layer; and

a second actuator configured to actuate the second thermal conduit into thermal contact with the second layer;

15 wherein the second thermal conduit includes a second body defining passageways configured for cooling fluid; and

wherein the pump and the heat exchanger are also in fluid communication with the passageways defined by the second body.

20 Claims 35 - 46 (canceled)